

## Two new species of the genera *Larinia* and *Cyclosa* from China (Araneae: Cybaeidae)

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**Abstract** — The present paper deals with two new species of the genera *Larinia* and *Cyclosa* from China under the names: *Larinia fangxiangensis* sp. nov. and *Cyclosa renaria* sp. nov.

**Key words** — Araneidae, *Larinia*, *Cyclosa*, new species, China.

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### Introduction

The genus *Larinia* has a worldwide distribution comprising 46 described species (Levi 1975; Harrod et al. 1991; Grasshoff 1970a-c, 1971; Tikader 1982; Levy 1986; Marusik 1986; Yaginuma 1986; Tanikawa 1989; Kupryjanowicz 1995; Yin et al. 1997; Platnick 2006). Grasshoff (1970a-c, 1971) split these species into eight genera, but Marusik (1986b), Tanikawa (1989), Harrod et al. (1991) and Yin et al. (1997) according to Levi (1975b), rejected Grasshoff's conclusions. In China, 11 species have been recorded up to the present (Yin et al. 1997). The genus *Cyclosa* is a larger group comprising 172 species worldwide, of which 35 species and 1 unnamed species are known in China (Levi 1977; Tikader 1982; Yaginuma 1986; Tanikawa 1992a-b, 1997; Tanikawa & Ono 1993; Yin et al. 1997; Biswas & Raychaudhuri 1998; Platnick 2006).

While examining the spider specimens recently collected from Mt. Leigong, Guizhou Province, China, two araneid spiders were found to be new to science, named *Larinia fangxiangensis* sp. nov. and *Cyclosa renaria* sp. nov. and described in the present paper.

Type specimens of the new species are deposited in the Museum of Hebei University, Hebei University, Baoding, China (MHBU).

All measurements given are in mm in this paper. Abbreviations used are as follows: ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye; MOA, median ocular area. Leg measurements are shown as total length (femur, patella and tibia, metatarsus, tarsus).

*Larinia fangxiangensis* new species  
(Figs. 1–6)

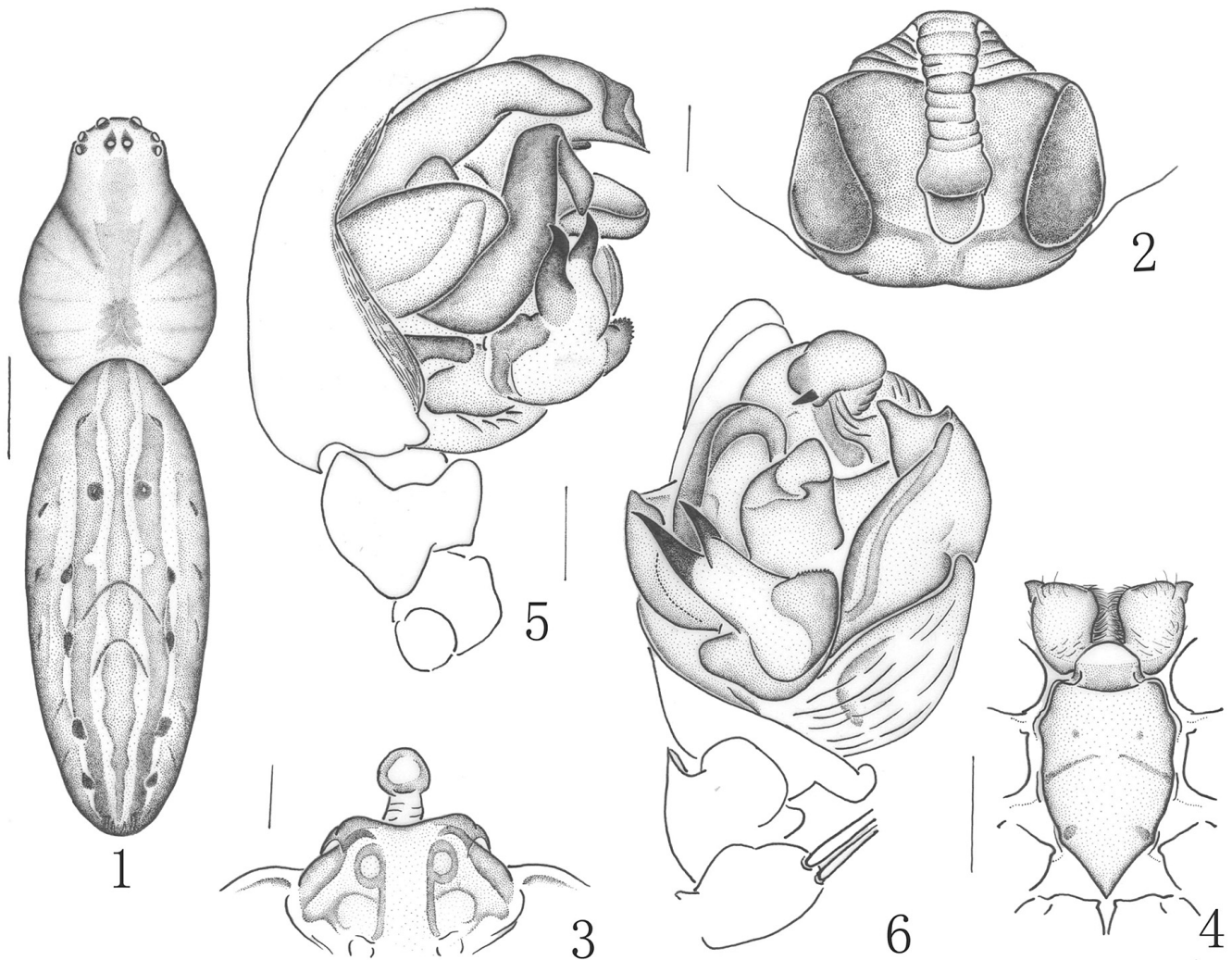
*Types*. Holotype ♀ (MHBU-Ar-3), and paratypes 14♀2♂

(MHBU-Ar-4), Mt. Leigong National Nature Reserve, Leishan County (26°27'N, 108°17'E; altitude 800–900 m), Guizhou Province, China, May 18, 2005, collected by Chen Hui-Ming.

*Etymology*. The specific name is a noun in apposition taken from the type locality.

*Diagnosis*. The new species is similar to *Larinia phthisica* (L. Koch, 1871) (Chrysanthus, 1961: 205, figs. 42–45; Grasshoff, 1970: 224–225; Tanikawa, 1989: 36, figs. 8–14) according to the shape of epigynum, but it differs from the latter in the length of the epigynal plate occupying about 2/3 of its width and with a large depression on each side, scape short and bulge near the end (Fig. 2); embolus of male palpus wide and long, piece-shaped, with a bend near the end, median apophysis with exterior denticles, with two S-shaped processes dorsally (Fig. 5–6).

*Females*. Total length 5.94–6.30. Holotype total length 5.94: cephalothorax 2.25 long, 1.57 wide; abdomen 3.87 long, 1.53 wide. Carapace gray yellow, with blackish margins and a brownish median band from PLEs to posterior edge. Fovea indistinct, radial furrow distinct. Both eye rows recurved. AME-AME > AME-ALE (0.13:0.11). PME-PME < PME-PL (0.03:0.23). MOA 0.39 long, front width 0.39, back width 0.25. Diameter: AME > ALE = PL = PME (0.13:0.10:0.10:0.10). Clypeus height 0.10. Chelicerae pale yellow, with four promarginal and three retromarginal teeth, with two rows of denticles between them. Endites gray yellow, inner margins pale yellow; Labium and sternum dark gray, sternum yellowish medially (Fig. 4). Legs gray yellow, with small black spots. Measurements of legs: I 12.87 (2.97, 4.59, 3.69, 1.62), II 10.26 (2.70, 3.78, 2.79, 0.99), III 4.94 (1.62, 1.57, 1.12, 0.63), IV 9.49 (2.70, 3.24, 2.61, 0.94). Leg formula: 1243. Abdomen oval, dorsum pale yellow, with three brownish median bands and a pair of lateral row of five black dots, covered with brown and white long hairs. Abdomen with a broad longitudinal gray brown band



**Fig. 1–6.** *Larinia fangxiangensis* new species. 1. Female (holotype) body, dorsal view. 2–3. Epigynum: 2, ventral view; 3, dorsal view. 4. Female sternum, ventral view. 5–6. Male left palp: 5, ventral view; 6, retrolateral view.. (Scales for Fig. 1, 1 mm; for Figs. 2–3, 0.1 mm; for Figs. 4, 0.5mm; for Figs. 5–6, 0.2 mm.)

ventrally. The epigynal plate with length occupying about 2/3 of its width and with a large depression on each side, scape short, wrinkled and widened near the end, distal of scape not reaching posterior edge of epigynal plate (Figs. 2–3).

**Males.** Total length 4.59–5.22. A male paratype total length 5.22: cephalothorax 2.16 long, 1.71 wide; abdomen 2.34 long, 1.53 wide. The shape, coloration and markings of body as in female, excepting smaller size and endites pale yellow. Diameter: AME > PME = ALE = PLE (0.14:0.10:0.10:0.10). AME-AME > AME-ALE (0.14:0.08), PME-PME < PME-PLE (0.03:0.20). MOA 0.40 long, front width 0.42, back width 0.25. Clypeus height 0.10. Measurements of legs: I 12.87 (3.06, 4.50, 4.05, 1.26), II 10.71 (2.79, 3.78, 3.15, 0.99), III 6.03 (1.89, 1.80, 1.71, 0.63), IV 9.27 (2.70, 3.06, 2.70, 0.81). Leg formula: 1243. Embolus of the palpus wide and long, piece-shaped, with a bend near the end; median apophysis with exterior denticles, dorsally with two S-shaped processes; stipes apophysis large and

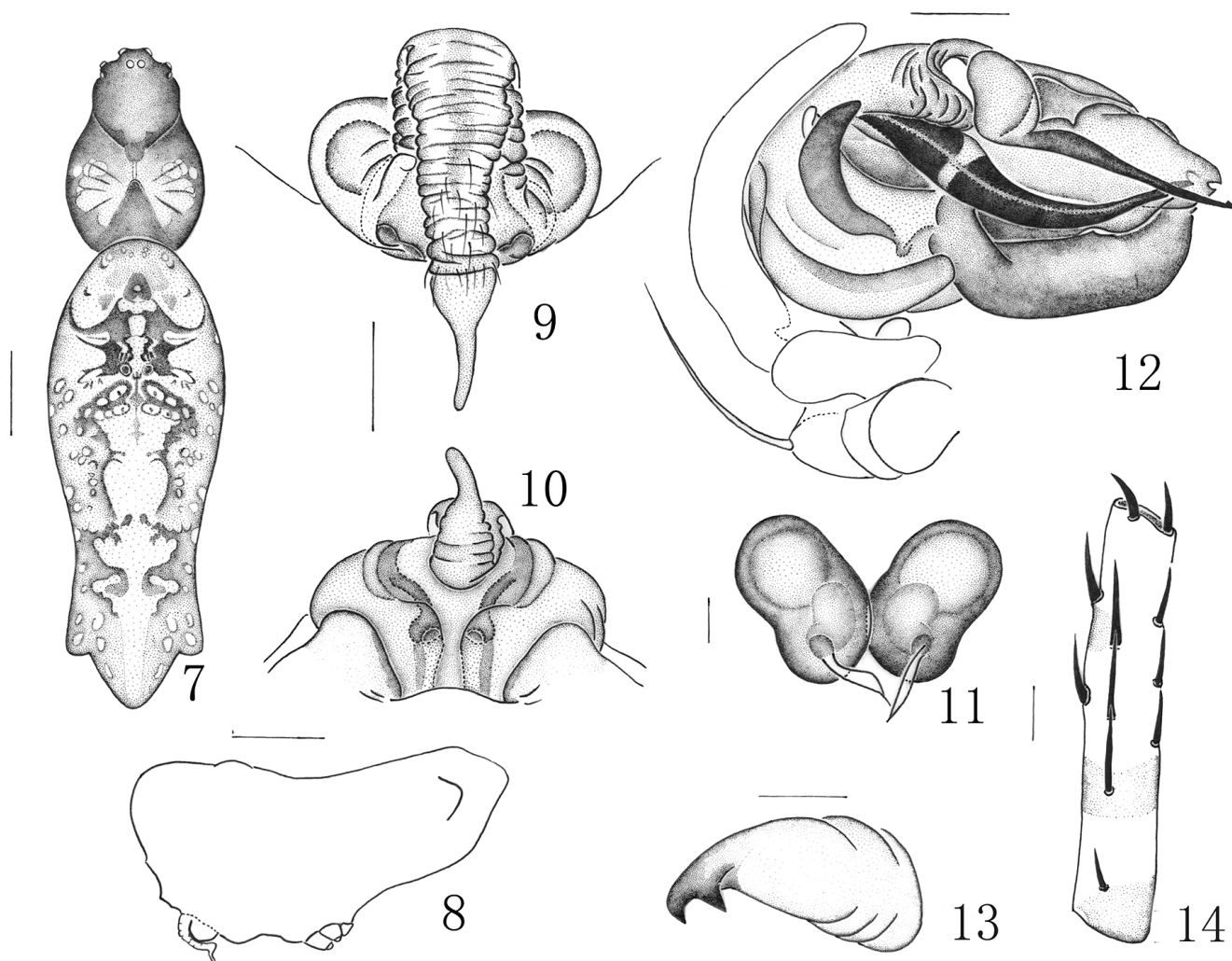
triangular (Fig. 5–6).

***Cyclosa reniformis* new species**  
[Japanese name: Hishigata-himegumo]  
(Figs. 7–14)

**Types.** Holotype ♀ (MHBV-Ar-5), and paratypes 2♀2♂ (MHBV-Ar-6), Mt. Leigong National Nature Reserve (26° 27'N, 108°17'E; altitude 800–900 m), Guizhou Province, China, June 15, 2005, collected by Hui-Ming Chen, Zhi-Sheng Zhang and Zheng-Guo Xie.

**Etymology.** The specific name is derived from the Latin word 'reniformis' referring to the shape of female spermathecae.

**Diagnosis.** The new species closely resembles *C. monticola* Bösenberg et Strand, 1906 (Tanikawa, 1992a: 24–26, figs. 23–34) according to the shape of epigynum and structure of palpus, but differs from the latter by the dorsum of abdomen yellow brown, with yellow and black markings



**Fig. 7–14.** *Cyclosa reniformis* new species. 7–8. Female (holotype) body: 7, dorsal view; 8, lateral view. 9–11, Epigynum: 9, ventral view; 10, dorsal view; 11, seminal receptacle. 12–13, Male left palpal organ: 12, retrolateral view; 13, median apophysis. 14, Male left II tibia, prolateral view. (Scales for Fig. 7–8, 1 mm; for Figs. 9–10, 12, 14, 0.2 mm; for Figs. 11, 13, 0.1 mm.)

(Fig. 7); female with spermathecae kidney-shaped (Fig. 11); the end of median apophysis of male palpus wide and straight, the basal lamella of median apophysis narrow and relatively long (Fig. 14).

**Females.** Total length 5.76–9.36. Holotype total length 7.92: cephalothorax 2.52 long, 1.70 wide; abdomen 5.67 long, 2.25 wide. Carapace gray blackish, both sides of the median fovea yellow. Both eye rows recurved. AME-AME < AME-ALE (0.10:0.15). PME-PME < PME-PLE (0.03:0.25). MOA 0.30 long, front width 0.36, back width 0.26. Diameter: ALE = PLE = PME = ANE (0.13:0.13:0.13:0.13). Clypeus height 0.10. Chelicerae yellow brown, with four promarginal and three retromarginal teeth. Labium and endites black brown, anterior margin of labium and inner margins of endites pale yellow; sternum black brown. Legs pale yellow with red brown to black annulations, short spines and setae. Measurements of legs: I 6.57 (1.98, 2.52, 1.44, 0.63), II 5.80 (1.80, 2.16, 1.26, 0.58), III 3.73 (1.35, 1.26, 0.67, 0.45), IV 5.49 (1.89, 1.98, 1.17, 0.45). Leg

formula: 1243. Dorsum of abdomen yellow brown mottled yellow and black markings, with a pair of dorsal tubercles anteriorly and 3 protuberances posteriorly. Venter of abdomen black with a narrow yellow line on each side and a pair of tubercles between epigynum and spinnerets. The epigynal plate with a lateral fold near the base on each side (Fig. 10), scape slender and wrinkled (Fig. 9), spermathecae kidney-shaped (Fig. 11).

**Males.** Total length 4.86–5.13. A male paratype total length 4.68: cephalothorax 2.25 long, 1.62 wide; abdomen 2.61 long, 1.21 wide. Carapace brown, anterior half part of thoracic region yellow brown. Both eye rows recurved. AME-AME > AME-ALE (0.11:0.08). PME-PME < PME-PLE (0.03:0.18). MOA 0.33 long, front width 0.35, back width 0.23. Diameter: AME > PLE = PME = ALE (0.12:0.10:0.10:0.10). Clypeus height 0.15. Chelicerae yellow, with three promarginal and four retromarginal teeth. Labium and endites black brown, anterior margin of labium and inner margins of endites pale yellow. Sternum black



brown with yellow brown spots in the middle. Legs pale yellow, with red brown and black annulations, and armed with short spines and setae. Measurements of legs: I 6.52 (2.02, 2.43, 1.44, 0.63), II 5.89 (1.89, 2.16, 1.30, 0.54), III 3.68 (1.26, 1.35, 0.67, 0.40), IV 5.44 (1.80, 1.89, 1.26, 0.49). Leg formula: 1243. The shape, coloration and markings similar to the female, but anteriorly dorsal tubercles lacking. The embolus of male palp rostriform, median apophysis distally wide and straight, basally with a narrow and relatively long lamella (Fig. 12, 14).

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